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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,567

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EXAMINER

CHRISS, JENNIFER A

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,567	Applicant(s) HASHIMOTO ET AL.	
	Examiner JENNIFER A. CHRISS	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 6-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/27/2006 11/21/2007 02/29/2008</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1 – 5 and 10 - 11 in the reply filed on February 15, 2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 2 – 5 and 10 – 11 are rejected as being dependent on rejected claim 1.

4. Claim 1 is indefinite for claiming properties such as knot strength and the twist index instead of chemical or structural features or methods to obtain the chemical or structural features. It has been held that claims are indefinite for claiming the invention in terms of physical properties rather than the chemical or structural features that produce said properties. *Ex parte Slob*, 157 USPQ 172, states, "Claims merely setting forth physical characteristics desired in an article, and not setting forth specific composition which would meet such characteristics, are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered

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in the future and which would impart said desired characteristics.” Also, “it is necessary that the product be described with sufficient particularity that it can be identified so that one can determine what will and will not infringe.” *Benger Labs, Ltd v. R.K. Laros Co.*, 135 USPQ 11, *In re Bridgeford* 149 USPQ 55, *Locklin et al. v. Switzer Bros., Inc.*, 131 USPQ 294. Furthermore, “Reciting the physical and chemical characteristics of the claimed product will not suffice where it is not certain that a sufficient number of characteristics have been recited that the claim reads only on the particular compound which applicant has invented.” *Ex parte Siddiqui*, 156 USPQ 426, *Ex parte Davission et al.*, 133 USPQ 400, *Ex parte Fox*, 128 USPQ 157. Furthermore, it is necessary that the product be described with sufficient particularity that it can be identified so that one can determine what will and will not infringe.

Claim Rejections - 35 USC § 102/103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 – 2, 4 – 5 and 10 are rejected under 35 U.S.C. 102(a), 102(b) and 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Endo (US 4,302,556).

Endo et al. is directed to an improved polyvinylidene fluoride filament (Abstract) useful in the production of fishing lines (column 5, lines 45 – 50).

As to claim 1, Endo et al. teach in Example 2 a polyvinylidene fluoride filament comprising a polymer blend of two inherent viscosity polyvinylidene fluorides having a blended inherent viscosity of 1.51 dl/g. The filaments have a tensile strength of 87.0 kg/mm² and knot strength of 69.3 kg/mm² (679.6 MPa). (column 4, lines 30 – 55). The Examiner submits that the inherent viscosity and the knot strength are within Applicant's claimed range.

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As to claim 5, Endo et al. teach that the resulting filament in Example 2 has a diameter of 297 microns (column 4, lines 30 – 55).

As to claim 10, Endo et al. teach that the filament is useful as a fishing line (column 5, lines 45 – 50).

As to claims 1 – 2 and 4, Endo et al. teach the claimed invention above but fails to teach a twist index of at least 0.90, a twist index of at least 0.92, a knot elongation of 16 - 25% and a Young's modulus of 1500 - 3500 MPa. It is reasonable to presume the discussed properties are inherent to Endo et al. Support for said presumption is found in the use of like materials (i.e. a vinylidene fluoride monofilament having an inherent viscosity of 1.51 dl/g and a knot strength of 679.6 MPa) which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties would obviously have been present once the Endo et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

8. Claims 1 – 5 and 10 are rejected under 35 U.S.C. 102(a), 102(b) and 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sato et al. (US 2003/0004292 A1).

Sato et al. is directed to a vinylidene fluoride resin monofilament for use as a fishing line (Title and page 1, [0002]).

As to claims 1 and 3, Sato et al. teach in Example 1 a monofilament

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having a sheath-core configuration, both sheath and core made of vinylidene fluoride (page 4, [0047]). The sheath has an inherent viscosity of 1.3 dl/g and the core has an inherent viscosity of 1.55 dl/g (page 4, [0047]); the core having an inherent viscosity of 1.55 dl/g is equated to Applicant's "a vinylidene fluoride resin having an inherent viscosity of at least 1.40 dl/g". Sato et al. teach that the resulting monofilament has a knot strength of 64.8 kg/mm² (page 5, Table 1) which is equivalent to 635.5 MPa.

As to claim 4, Sato et al. teach in Example 1 that the knot elongation is 26% (page 5, Table 1), which lies in Applicant's claimed range.

As to claim 5, Sato et al. teach in Example 1 that the diameter is 296 microns (page 5, Table 1), which overlaps with Applicant's claimed range.

As to claim 10, Sato et al. teach that the monofilament is used as a fishing line (page 1, [0002]).

As to claims 1 – 2 and 4, Sato et al. teach the claimed invention above but fails to teach a twist index of at least 0.90, a twist index of at least 0.92 and a Young's modulus of 1500 - 3500 MPa. It is reasonable to presume the discussed properties are inherent to Sato et al. Support for said presumption is found in the use of like materials (i.e. a vinylidene fluoride monofilament having an inherent viscosity of 1.55 dl/g and a knot strength of 635.5 MPa) which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties would

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obviously have been present once the Sato et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

Claim Rejections - 35 USC § 103

9. Claims 1 – 2, 4 – 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. (US 6,170,192).

Nakano et al. directed to a leader for fly fishing (Title)

As to claim 1, Nakano et al. teach a leader and a tippet section comprising vinylidene fluoride resin having an inherent viscosity ranging from 1.0 to 1.7 dl/g (column 2, lines 19 - 25). It should be noted that the inherent viscosity range overlaps with Applicant's claimed range of at least 1.4 dl/g. Nakano et al. teaches the various thread diameters of the leader and tippet sections which typically range from 300 – 800 micrometers (0.3 - 0.8 millimeters) for the butt section and 50 - 600 micrometers (0.05 – 0.6 millimeters) for the tippet section (column 4, lines 45 - 55). The Examiner submits that these diameters imply that the structure is a monofilament as required by Applicant. In Example 4, the leader and tippet for fly fishing were made from 1.35 dl/g viscosity vinylidene fluoride resin and had a knot strength of 62 kg/mm² (608 MPa) (column 6, lines 50 – 69). It should be noted that a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties.

Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Court held as proper a rejection of a claim directed to an alloy of

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“having 0.8% nickel, 0.3% molybdenum, up to 0.1% iron, balance titanium” as obvious over a reference disclosing alloys of 0.75% nickel, 0.25% molybdenum, balance titanium and 0.94% nickel, 0.31% molybdenum, balance titanium.) In this case, Example 4 discloses the use of 1.35 dl/g which is very close to the claimed 1.40 dl/g and the knot strength is within Applicant’s claimed range.

As to claim 5, Nakano et al. teaches the various thread diameters of the leader and tippet sections which typically range from 300 – 800 micrometers (0.3 - 0.8 millimeters) for the butt section and 50 - 600 micrometers (0.05 – 0.6 millimeters) for the tippet section (column 4, lines 45 - 55).

As to claim 10, Nakano et al. directed to a leader for fly fishing (Title); the Examiner equates this to a fishing line.

As to claims 1 – 2 and 4, Nakano et al. teach the claimed invention above but fails to teach a twist index of at least 0.90, a twist index of at least 0.92, a knot elongation of 16 - 25% and a Young's modulus of 1500 - 3500 MPa. It is reasonable to presume the discussed properties are inherent to Nakano et al. Support for said presumption is found in the use of like materials (i.e. a vinylidene fluoride monofilament having an inherent viscosity of 1.35 dl/g and a knot strength of 608 MPa) which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties would obviously have been present once the Nakano et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977). Reliance upon inherency is not improper even though

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the rejection is based on Section 103 instead of 102. *In re Skoner*, et al. (CCPA) 186 USPQ 80.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endo (US 4,302,556) in view of Boese (US 3,903,635).

Endo et al. teach that the filament can be used as a fishing line but does not specifically indicate that the fishing line is in a form of being wound around a spool.

Boese is directed to a convertible fishing reel (Title). Boese discusses a typical fishing rod assembly having a rod with a handle portion and the fishing reel is provided with a line spool for storage of a desired length of fishing line which comes off the spool and is directed through an eyelet. The fishing reel is provided with a crank handle to effect manual rotation of the line spool for the purpose of reeling the line in or out (column 2, lines 1 - 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the fishing line of Endo on a spool as suggested by Boese motivated by the desire to control the length of the line and to store the remaining portion of fishing line while fishing.

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (US 2003/0004292 A1) in view of Boese (US 3,903,635).

Sato et al. teach that the filament can be used as a fishing line but does not specifically indicate that the fishing line is in a form of being wound around a

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spool.

Boese is directed to a convertible fishing reel (Title). Boese discusses a typical fishing rod assembly having a rod with a handle portion and the fishing reel is provided with a line spool for storage of a desired length of fishing line which comes off the spool and is directed through an eyelet. The fishing reel is provided with a crank handle to effect manual rotation of the line spool for the purpose of reeling the line in or out (column 2, lines 1 - 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the fishing line of Sato et al. on a spool as suggested by Boese motivated by the desire to control the length of the line and to store the remaining portion of fishing line while fishing.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lilenfeld et al. (US 4,564,013) is directed to surgical filaments from vinylidene fluoride copolymers (Title). Control 1 is made of 100% vinylidene fluoride and has a knot strength of 69,000 psi, tensile strength of 145,000 psi and 430,000 psi (Table II).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. CHRISS whose telephone

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number is (571)272-7783. The examiner can normally be reached on Monday - Thursday, 8 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571 - 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. A. C./
Examiner, Art Unit 1794

/Ula C Ruddock/
Primary Examiner, Art Unit 1794